

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Tatsuya Yoshida et al.
 Appl. No. : 09/844,507
 Filed : April 27, 2001
 For : WATER PRECLUSION
 SYSTEM FOR WATERCRAFT
 EXHAUST
 Examiner : Unknown

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) Michael A. Giuliana, Reg. No. 42,611

PRELIMINARY AMENDMENT

Assistant Commissioner for Patents
 Washington, D.C. 20231

Dear Sir:

Applicant respectfully requests that the following amendments be entered before examination of the above-identified application.

IN THE SPECIFICATION

Please amend paragraph beginning at line 6, page 1 as follows:

--This application is a continuation of U.S. Patent Application Serial No. 09/422,214, filed October 19, 1999, now U.S. Patent No. 6,261,140, which is based on and claims priority to Japanese Patent Application No. 10-296932 filed October 19, 1998.--

IN THE CLAIMS:

Please add new claims 22-47 as follows:

22. A watercraft having a hull defining an engine compartment in which an engine is provided, the engine including at least one exhaust port for discharging exhaust gases from the engine to the atmosphere through an exhaust system, the exhaust system comprising an exhaust passage extending between the exhaust port and an exhaust

discharge port provided on a first side of a hull tunnel of the hull, the exhaust passage including a watertrap device provided on a second side of the hull tunnel opposite the first side, the exhaust passage including an intermediate portion extending generally transverse to a longitudinal axis of the hull and extending between the watertrap device and the discharge port, the intermediate portion extending above a top of the hull tunnel, and a first chamber branched from and communicating with the intermediate portion, the first chamber positioned directly above the tunnel.

23. A watercraft as in claim 22, wherein the first chamber branches upwardly from the intermediate portion.

24. A watercraft as in claim 22, wherein the first chamber is provided at a position downstream from an apex of the intermediate portion.

25. A watercraft as in claim 22, wherein the intermediate portion includes a throat provided between the first chamber and the intermediate portion, through which the first chamber and the intermediate portion communicate, and the throat and the chamber being tuned so as to form a Helmholtz resonator to attenuate noise from the engine.

26. A watercraft as in claim 25 wherein the throat and the Helmholtz resonator are arranged so as to branch upwardly from the intermediate portion.

27. A watercraft having a hull defining an engine compartment in which an engine is provided, the engine including at least one exhaust port for discharging exhaust gases from the engine to the atmosphere through an exhaust system, the exhaust system comprising an exhaust passage extending between the exhaust port and an exhaust discharge port provided on a first side of a hull tunnel of the hull, the exhaust passage including a watertrap device provided on a second side of the hull tunnel opposite the first side, the exhaust passage including an intermediate portion extending between the watertrap device and the discharge port, the intermediate portion extending above the top of the hull tunnel, a first chamber branched from and communicating with the intermediate portion and, a second chamber communicating with the intermediate portion at a position between the first chamber and the discharge port, the first chamber having a cross-sectional area larger than a cross-sectional area of the intermediate portion the first chamber positioned directly above the hull tunnel.

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28. A watercraft as in claim 27 wherein the first chamber branches upwardly from the intermediate portion, and wherein the second chamber comprises a cavity elongated in a substantially horizontal direction.

29. A watercraft as in claim 28, wherein the second chamber is arranged such that a maximum rated water line of the watercraft loaded with a maximum rated load is below an upper wall of the second chamber.

30. A watercraft as in claim 29, wherein the intermediate portion includes a connector portion extending a predetermined length into an interior of the second chamber.

31. A watercraft as in claim 30, wherein the second chamber and the predetermined length are configured such that an amount of water sufficient to fill the second chamber to the maximum rated waterline is not sufficient to flow past the connector portion when the watercraft is inverted.

32. A watercraft as in claim 30, wherein the intermediate portion includes a throat provided between the first chamber and the intermediate portion, through which the first chamber and the intermediate portion communicate, the throat and the first chamber being tuned so as to form a Helmholtz resonator and to attenuate noise from the engine, and the connector portion and the Helmholtz resonator being tuned so as to provide sound attenuation of the exhaust of the engine.

33. A watercraft having a hull defining an engine compartment in which an engine is provided, the engine including at least one exhaust port for discharging exhaust gases from the engine to the atmosphere through an exhaust system, the exhaust system comprising an exhaust passage extending between the exhaust port and an exhaust discharge port provided on a first side of a hull tunnel of the hull, the exhaust passage including a watertrap device provided on a second side of the hull tunnel opposite the first side, the exhaust passage including an intermediate portion extending between the watertrap device and the discharge port, the intermediate portion extending above the top of the hull, a first chamber branched from and communicating with the intermediate portion and, a cooling jacket configured to circulate a coolant in thermal communication with the exhaust passage, a first telltale port and a second telltale port configured to discharge a stream of the coolant at a position forward of an operator's seating position of the watercraft, the first telltale port communicating with the cooling jacket at a first

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position, the second telltale port communicating with the cooling jacket at a second position downstream from the first position.

34. A watercraft as in claim 33, wherein the exhaust passage additionally comprises an expansion chamber portion including an expansion chamber and a downstream portion communicating with the expansion chamber portion through an exhaust passage coupling, and extending downstream from the expansion chamber portion, the cooling jacket including a first portion in thermal communication with the expansion chamber portion and a second portion in thermal communication with the downstream portion, the first and second portions of the cooling jacket fluidically communicating through the exhaust passage coupling, the first telltale port communicating with the first portion of the cooling jacket and the second telltale port communicating with the second portion of the cooling jacket.

35. A watercraft having a hull defining an engine compartment in which an engine is provided, the engine including at least one exhaust port for discharging exhaust gases from the engine to the atmosphere through an exhaust system, the exhaust system comprising an exhaust passage extending between the exhaust port of the engine and an exhaust discharge port provided on a first side of a hull tunnel of the hull, the exhaust passage including a watertrap device provided on a second side of the hull tunnel opposite the first side, the exhaust passage including an intermediate portion extending between the watertrap device and the discharge port, the intermediate portion extending above a top of the hull tunnel, and a first chamber communicating with the intermediate portion and having a cross-sectional area larger than a cross-sectional area of the intermediate portion, the first chamber provided downstream of an apex of the intermediate portion, the first chamber being disposed relative to a maximum rated water line of the watercraft such that an upper wall of the first chamber lies above the maximum rated waterline.

36. A watercraft as in claim 35, wherein the intermediate portion includes a connector portion extending a predetermined length into an interior of the first chamber.

37. A watercraft as in claim 36, wherein the first chamber and the predetermined length are configured such that an amount of water sufficient to fill the first reservoir to the maximum rated water line is not sufficient to flow past the connector portion when the watercraft is inverted.

38. A watercraft as in claim 36, further comprising a Hemholtz resonator branched from the intermediate portion at a position downstream from an apex of the intermediate portion.

39. A watercraft having a hull defining an operator's seating position and an engine compartment in which an engine is provided, the engine including at least one exhaust port for discharging exhaust gases from the engine to the atmosphere through an exhaust system, the exhaust system comprising an exhaust passage extending between the exhaust port of the engine and an exhaust discharge port, a cooling jacket configured to circulate coolant in thermal communication with the exhaust passage, and first and second telltale ports configured to discharge streams of cooling jacket liquid at positions forward of the operator's seating position of the watercraft, wherein the exhaust passage additionally comprises an expansion chamber portion including an expansion chamber and a downstream portion communicating with the expansion chamber portion through an exhaust passage coupling, and extending downstream from the expansion chamber portion, the cooling jacket including a first portion in thermal communication with the expansion chamber portion and a second portion in thermal communication with the downstream portion, the first and second portions of the cooling jacket fluidically communicating through the exhaust passage coupling, the first telltale port communicating with the first portion of the cooling jacket and the second telltale port communicating with the second portion of the cooling jacket.

40. A watercraft as in claim 39, wherein the first and second telltale ports are configured to discharge streams of coolant on opposite sides of the hull.

41. A watercraft having a hull, an engine positioned in the hull, the engine including at least one exhaust port for discharging exhaust gases from the engine, an exhaust system comprising an exhaust passage extending between the exhaust port of the engine and an exhaust discharge provided on the hull, a cooling jacket configured to guide coolant into thermal communication with the exhaust passage, a first coolant discharge comprising a first coolant discharge port provided on the hull, a first coolant discharge conduit extending from the first coolant discharge port to a first position along the cooling jacket so as to discharge coolant from the first position along the coolant jacket to the first discharge port, a second coolant discharge port provided on the hull, and a second coolant

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discharge conduit extending from a second position along the cooling jacket to the second coolant discharge port so as to discharge coolant from the second position along the coolant jacket to the second discharge port.

42. The watercraft as in claim 41, wherein the first and second discharge ports are arranged on opposite sides of the longitudinal axis of the hull.

43. The watercraft according to claim 41, additionally comprising a steering assembly, the first and second discharge port being arranged such that streams of coolant discharged from the first and second coolant discharge ports are visible to a rider operating the steering assembly.

44. The watercraft according to claim 43, wherein the first and second coolant discharge ports are arranged forward from the steering assembly.

45. A watercraft having a hull defining an engine compartment, a seat pedestal defining at least an operator's seating position being arranged above the engine compartment, a seat removably attached to the seat pedestal, a storage container defined beneath the seat, a tunnel formed on a lower surface of the hull, a propulsion device positioned within the hull tunnel, an engine disposed in the engine compartment configured to drive the propulsion device, the engine including an exhaust port for discharging exhaust gases from the engine, a first exhaust conduit extending from the exhaust port to a watertrap device, the watertrap device being positioned on a first side of the tunnel, the second exhaust conduit extending from the watertrap device over the hull tunnel to an exhaust discharge on a second side of the hull tunnel opposite the first side for discharging exhaust gases to the atmosphere, and a chamber positioned directly above the hull tunnel and communicating with the second exhaust conduit, the chamber being positioned between a wall of the storage container and a rear wall of the engine compartment.

46. The watercraft as in claim 45, wherein the chamber is spaced from the storage cavity.

47. The watercraft as in claim 45, wherein the chamber forms a Helmholtz resonator.

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COMMENTS

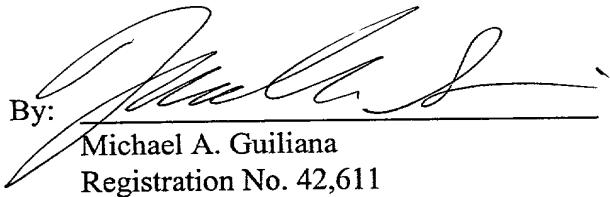
By the foregoing amendments, Applicants add new Claims 22-47 which are fully supported by the specification as originally filed. No new matter is added by these amendments. Accordingly, Applicant respectfully requests entry of these amendments before examination by the Examiner on the merits begins.

Respectfully submitted,

KNOBBE, MARTENS, OLSON & BEAR, LLP

Dated: February 4, 2002

By:



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VERSION WITH MARKINGS SHOWING CHANGES MADE

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